

Work Order ID 152463

Monday, October 24, 2016 11:41:42 AM

152463

Page 1

Item ID: D2521 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Individual Bearpaw
 Start Date: 10/7/2016 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 10/24/2016 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: DAS 21 Date: OCT 24 2016 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: 9-89 Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2521	Rev J								
120		0.00							
120	FLOW WATER JET								
Waterjet	Memo	0.31							
FLOW CNC Waterjet	Cut Blank as per D2521 blank file								
130		0.04							
130	HAAS CNC VERTICAL MACHINING #1								
HAAS 1	Memo	0.56							
HAAS CNC vertical machine #1	1-Inspect material for defects or damage prior to machining 2-Machine as per Folio and Dwg D2521 Identify as D2521 3-Deburr								
140		0.00							
140	QC2- Inspect parts off machine FAI/FAIB								
QC	Memo	0.01							
Quality Control									

4

2016/10/27

4

4

DAS
45
9-89

2016-11-04

4

4

DAS
45
9-89

2016-11-04

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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152463

Page 2

Item ID: D2521

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Individual Bearpaw

Start Date: 10/7/2016 Start Qty: 4.00

4

Cust Item ID:

Required Date: 10/24/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool # Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

QC8- Inspect parts - second check

0.00

150

QC

Memo

0.01

Quality Control

D.A. 16/11/07

4

φ

DAS
08
9-89

160

Identify as per dwg & Stock Location: St

0.00

160

Packaging

Memo

0.01

Packaging

4 NOV 08 2016

DAS
6
9-89

170

QC21- Final Inspection - Work Order Release

0.00

170

QC

Memo

0.07

Quality Control

16/11/8 JH

16.11-8

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
Root Cause				FAULT CATEGORY																					
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐		Power Loss/Surge ☐		Positioned Wrong ☐															
Design ☐		Operator ☐		Bending ☐		Set-up ☐		Folio/Program ☐		Outside Dimensions ☐															
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐		Grain ☐		Over/Under tolerance ☐															
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐		Weld ☐		Part Incorrect ☐															
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐		Wrong Stock Pulled ☐		Part Lost/Missing ☐															
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐		Out of Sequence ☐		Part Moved ☐															
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐		Off-set ☐		Drawing ☐															
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐		Mislabeled ☐		Finish ☐															
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐		Fit/Function ☐		Misread ☐															
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐		Misaligned/off center ☐		Turning Sequence ☐															
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : _____																					
Misidentified ☐		Past Due ☐																							

Picklist Print

Monday, October 24, 2016 11:41:42 AM

Page 1

Work Order ID: 152463

152463

Parent Item: D2521

D2521

Parent Item Name: Individual Bearpaw

Start Date: 10/7/2016

Required Date: 10/24/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A 08-10-01 New Manufacturing Method JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased			No		sf	454.0000		29.47368			
MUHMWB10									**	<u>27.3</u>		<u>on 10/10/27</u>	
UHMW 1" Black - 48"x120" Tivar Mfg.#52480104													

Location

Loc Qty

Loc Code

MAT

40

m135497

40

13.3

MAT018

414

m135013

14

m135913

400

14

DQA: _____ Date: _____



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QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
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				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
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Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : _____			

DART

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				D2521	SHEET 1 OF 3
DATE	06.07.28			TITLE	SCALE
				205 BEARPAW	NTS
A	95.11.28	NEW ISSUE			
B	96.01.11	SHOW BENDING MOVE HOLES			
C	96.01.29	ADJUST HOLE LOCATION FOR TOOLING			
D	96.05.14	ADJUSTED BEAR PAW THICKNESS			
E	96.12.18	43.500 WAS 46.750			
F	97.05.07	ADDED REAR POCKET, MOVED HOLES			
G	98.08.06	ADD C'BORE AND CHAMFER EDGES			
H	03.01.30	CHANGE GEOMETRY FOR RUN-ON LDG.			
I	05.05.20	REMOVE BEND; CHANGE TOLERANCES			
J	06.07.28	CHANGE FOR FLOAT SKIDTUBE			

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WITHOUT NOTICE
WORK ORDER
NO. 152463/MCJ
16-10-24

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DART

DESIGN

DRAWN BY

DART AEROSPACE LTD

HAWKESBURY, ONTARIO, CANADA

CHECKED

APPROVED

DRAWING NO.

REV. J

D2521

SHEET 2 OF 3

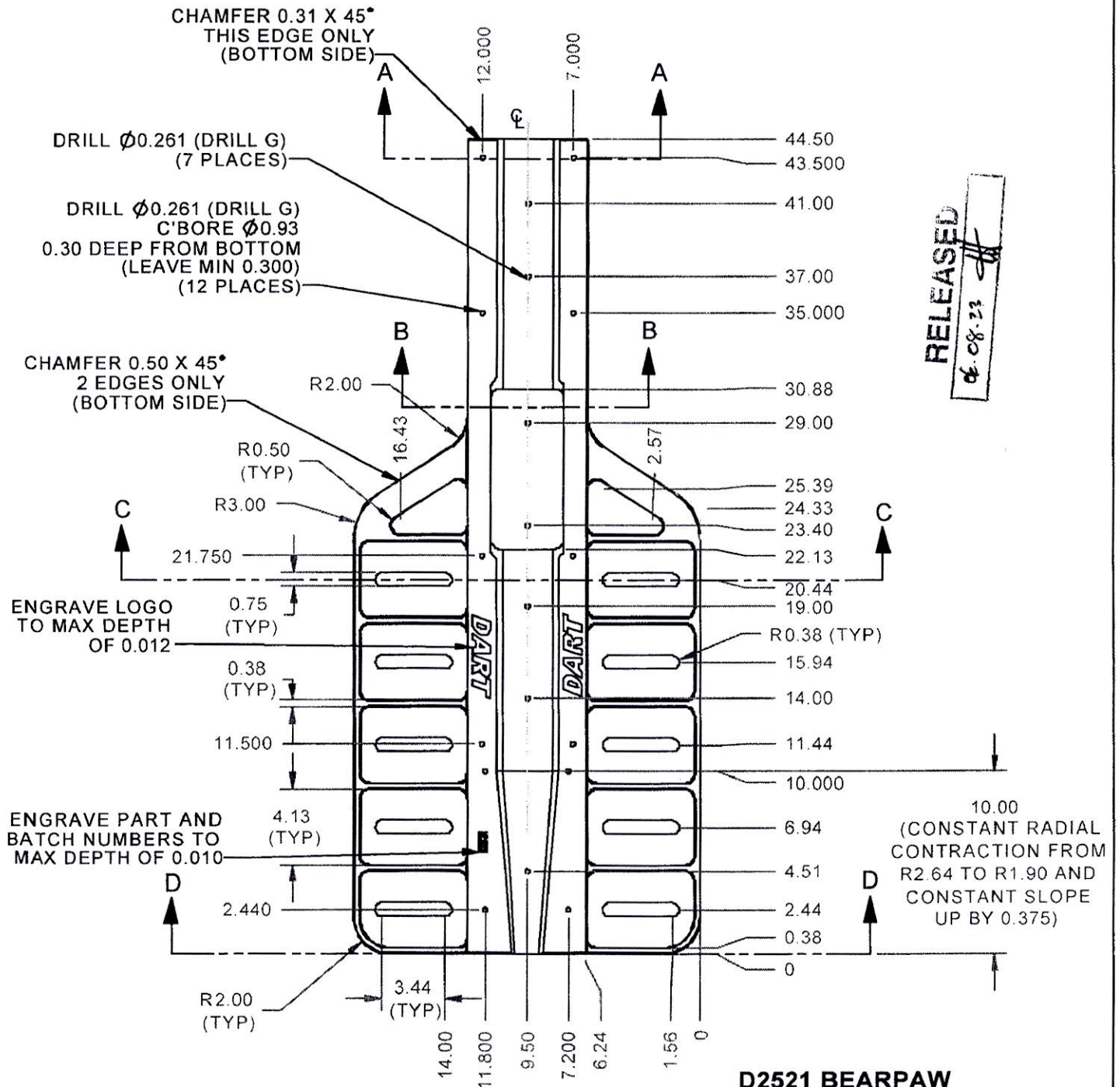
DATE

TITLE

SCALE

06.07.28**205 BEARPAW**

1:8

**NOTES:**

- 1) MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689, 1.000 THICK (MACHINE TO 0.950)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.030
- 6) PART IS SYMMETRIC ABOUT Φ

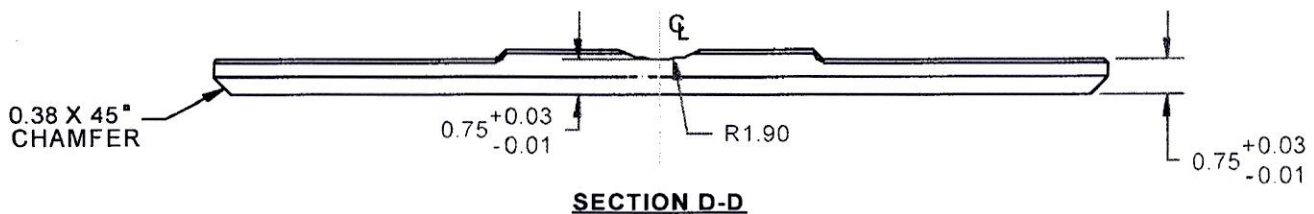
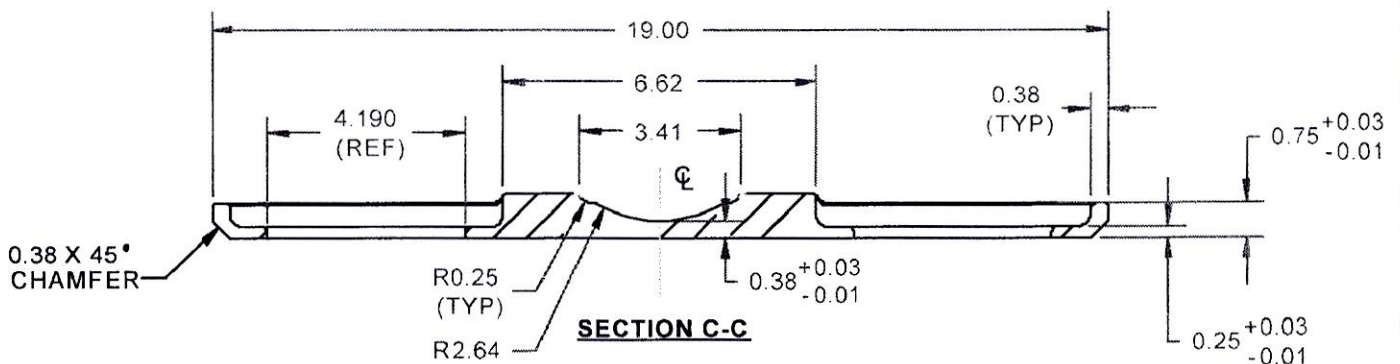
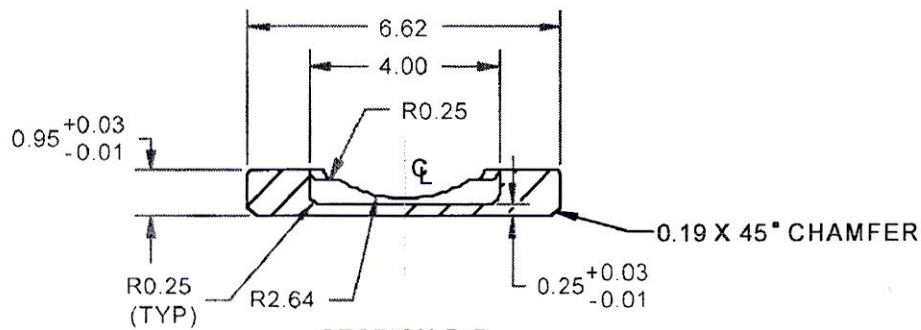
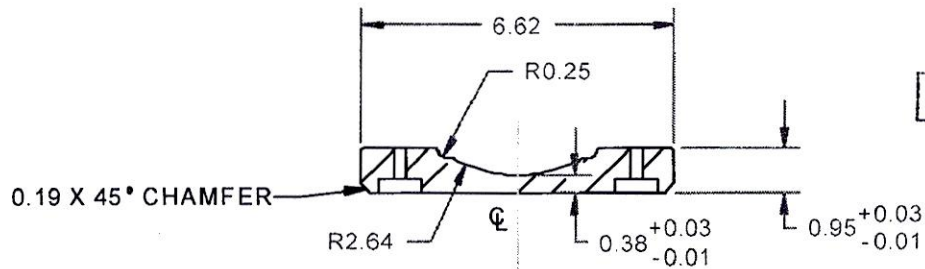
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CHECKED	APPROVED	DRAWING NO.	REV. J
<i>Handwritten initials CP</i>	<i>Handwritten initials</i>	D2521	SHEET 3 OF 3
DATE	TITLE		SCALE
06.07.28	205 BEARPAW		1:4

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06.08.23 ~~11~~



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